

GREENLAWNS HIGH SCHOOL
FINAL EXAMINATION YEAR 2024
COMPUTER APPLICATION

MARKS : 100

STD IX

TIME : 2 HRS

You will not be allowed to write during the first 10 minutes.

This time is to be spent in reading the question paper.

The time given at the head of this paper is the time allowed for writing the answers.

This paper is divided into two Sections.

Attempt all questions from Section A and any four questions from Section B.

The intended marks for questions or parts of questions are given in brackets[]

(SECTION A)

(Attempt all questions)

Question 1 :

Multiple choice question [Each is of 1 mark]

(i) Driving a car or truck or bus or any other vehicle corresponds to which principle of OOPS?

- a. Inheritance
- b. Polymorphism
- c. Encapsulation
- d. Abstraction

(ii) A package contains

- (a) Tags (b) classes (c) data (d) Arrays

(iii) What do you mean by abstraction?

- (a) Minimizing the use of variable
- (b) Minimizing the use of functions
- (c) The act of representing essential features without including background and details.
- (d) None of these

(iv) What do you mean by encapsulation?

- (a) A method of combining data and its associated functions in the form of single unit
- (b) Use of only one function in multiple class variables
- (c) use of only one class variable and multiple methods
- (d) none of these

(v) A type of loop when the loop executes at least once, even if the text expression evaluates to 'true'

- (a) for
- (b) while
- (c) do-while
- (d) switch

(vi) Which of these jump statements can skip processing the remainder of code in its body for a particular iteration?

- (a) break
- (b) return
- (c) exit
- (d) continue

(vii) The input in Blue J occurs in which window

- (a) console window
- (b) terminal window
- (c) windows 11

(viii) Assigning value to a variable during declaration is called

- (a) declaration
- (b) assignment
- (c) initialization
- (d) input

(ix) In case you need to give a proper message prompt screen before taking an input from the user. Which would be the most preferable method?

- (a) initialization
- (b) parameterizing
- (c) scanner input
- (d) none of these

- (x) Which among the following function returns the absolute value of a number.
- (a) Math.absolute()
 - (b) Math.neutral()
 - (c) Math.abs()
 - (d) Math.positive()
- (xi) What does Math.max(x, y) do in Java?
- (a) It returns the smaller of the two values, x and y.
 - (b) It returns the maximum difference between x and y.
 - (c) It returns the larger of the two values, x and y.
 - (d) It returns the product of x and y
- (xii) Keyword used for performing process of branching in Java program
- (a) break
 - (b) while
 - (c) switch-case
 - (d) for
- (xiii) Name the type of error in the statement given below:
- ```
final int x=0;
x++;
```
- (a) syntax
  - (b) logical
  - (c) runtime
  - (d) simple
- (xiv) We need to display "Valid Access" if the username and password are both equal to 1, else we want to display "Invalid Access". What is the right way to do it?
- (a) if(n= = 1 && code = = 1)
  - (b) if(n= = 1 || code = = 1)
  - (c) Both the if() statement given are correct
  - (d) Both the if() statement given are in correct
- (xv) The \_\_\_\_\_ - are user defined words in Java statement.
- (a) Keywords
  - (b) Methods
  - (c) Identifiers
  - (d) Packages



```
c+=a/2+b%8+c;
c-=a-b*2+c*3;
System.out.println(c);
}}
```

(e) Express the following if statement using logical NOT operator: [2 marks]

```
if(a%2==0)
```

(f) Rewrite the following using Ternary operator [2 marks]

```
if(income<=100000)
 tax=0;
else
 tax=12;
```

(g) Convert the following segment into an equivalent do while loop.

```
int x,c; [2 marks]

for(x=10,c=20;c>10;c=c-2)
x++;
```

(h) Predict the output of the following [2 marks]

```
Math.pow(3,2)+Math.ceil(4.2)
```

(i) Determine how many times the loop will be executed. [2 marks]

```
int p=200;
while(true)
{
if(p<100)
break;
p=p-20;
}
```

(j) What is the return type of the Math.round() function if the parameter is

(i) float data type [2 marks]

(ii) double data type

**(SECTION B)**

**(Answer any four questions from this Section)**

***The answers in this section should consist of the programs in either BlueJ environment or any program environment with Java as the base. Each program should be written using variable description/mnemonic codes so that the logic of the program is clearly depicted. Flowcharts and algorithms are not required.***

Question 3.

[ 15 marks]

Write a program in Java to input two unequal numbers. Display after swapping their values in the variables without using a third variable.

Sample Input a=75, b=80

Sample Output a=80, b=75 .

Question 4.

[ 15 marks]

A shopkeeper offers 10% discount on the printed price of a mobile phone. However, a customer has to pay 9% GST on the remaining amount. Write a program in Java to calculate the amount to be paid by the customer taking printed price as an input.

Question 5.

[15 marks]

An ICSE school displays a notice on the school notice board regarding admission in Class XI for choosing stream according to the marks obtained in English, Math and Science in Class X board Examination.

| Marks obtained in different subjects               | Stream       |
|----------------------------------------------------|--------------|
| English, Math and Science $\geq 80\%$              | Pure Science |
| English and Science $\geq 80\%$ , Math $\geq 60\%$ | Bio. Science |
| English, Math and Science $\geq 60\%$              | Commerce     |

Print the appropriate stream allotted to a candidate. Write a program to accept their marks.

Question 6.

[15 marks]

Write a program to display the following pattern(Use Loop)

```
I
I C
I C S
I C S E
```

Question 7.

[15 marks]

Write a program to input vowels in lowercase and display their ASCII values.

Question 8.

[15 marks]

Write the program in Java to display the first ten terms of the following series:

1,-3,5,-7,9.....

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